MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 3, 2017/2018

BAC 3674 – ADVANCED MANAGEMENT ACCOUNTING

(All sections / Groups)

4 June 2018
9.00 a.m. –12.00 noon
(3 Hours)

INSTRUCTIONS TO STUDENT:

1. This paper consists of 7 pages excluding cover page with 4 Questions only.
2. Answer **ALL** questions.
3. All questions carry equal marks and the distribution of marks for each question is given.
4. Please write all your answers in the Answer Booklet provided.

QUESTION 1

PART A

Prime Food Caterer (PFC) has been operating food catering services in Melaka for 8 years. PFC believes strongly in producing high-quality food and would like to use TQM tools to measure quality.
PFC has recognised the need to produce good quality products for its customers and has planned to prepare a formalised quality management programme.

Required:

a) Explain what is meant by TQM and use examples to show how it may be introduced into different areas of PFC's food catering business in relation to design, food production, sales and suppliers.

(5 marks)

b) Explain why the adoption of TQM is particularly important within a Just-In-Time (JIT) production environment.

(4 marks)

c) Explain four quality costs and prepare a cost analysis of prevention costs, appraisal costs, internal failure costs and external failure costs using actual costs relevant to the business of PFC as listed below:

	RM
Customers complaints	1,500
Disposing of food scrap	3,500
Suppliers evaluations	3,500
Restoring reputation	2,400
Quality training	1,500
Rework	2,000
Equipment maintenance	1,200
Product testing	1,500
Product replacement	2,300
Opportunity costs of sales	5,300

(6 marks)

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PART B

Melaka.com is a large Malaysian owned company which manufactures and markets office communications systems. The company has grown rapidly via acquisition and concentrates its activities in the rapidly growing and highly competitive mobile phone market.

Summarised income statement (**RM Millions**) and share price highlights:

Year	2014	2015	2016	2017
Revenue	203	826	1,278	2,859
Costs	(173)	(491)	(747)	(1,591)
Profit/(loss)	30	335	531	1,268
Year-end share price	RM5	RM20	RM80	RM110

The board of directors are very concern about the cash-flows position of the company and have requested its cost management analyst to forecast its cash position for the next 5 years. Cost management analyst has provided the following estimates of projected cash flows which are received and paid at the end of the year:

Year	2018	2019	2020	2021	2022
	RM (Millions)				
Cash outflows	2,400	2,500	2,600	2,700	2,800
Cash inflows	4,000	4,600	6,000	7,400	9,000

The cash outflows can be estimated with a high degree of certainty owing to the fixed nature of the costs. On the other hand, the cash inflows estimates are subject to considerable uncertainty because of the alternative outcomes that may arise. There are three possible market scenarios that are likely to impact on the inflows:

High competition	There is a 40% probability of this occurring and the consequence will be a reduction of 20% on the estimate of cash inflows.
Average competition	There is a 30% probability of this occurring and the consequence will be a reduction of 10% on the estimate of cash inflows.
Less competition	There is a 30% probability of this occurring and the consequence will be an increase of 5% on the estimate of cash inflows.

The cost management analyst has worked out the expected values (EV) for the impact of the above market scenarios, i.e. EV of an inflow of RM1 would be RM 0.905.

The cost of capital is 12%.

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The discounting factor for 12% is as below:

Year 1	Year 2	Year 3	Year 4	Year 5
0.893	0.797	0.712	0.636	0.567

All computations are to be rounded to two decimal points.

Required:

a) Calculate the NPV of the future cash flows for the period 2018 – 2022. Your answers should show all relevant working notes and explain the basis of your calculation.

(4 marks)

b) Comment on the relevance of your answer in the evaluation of future performance.

(6 marks)

[TOTAL 25 MARKS]

QUESTION 2

PART A

Hualong Sdn. Bhd. (HL) produces three types of household products, AA, BB, and CC for Malaysia market. The management accountant of HL has identified the following overhead costs and cost drivers for the current period.

Activity	Cost pools (RM)	Cost driver
Machine maintenance	200,000	Machine hours
Machine set ups	140,000	Machine set ups
Purchasing	180,000	Purchase orders
Material handling	120,000	Material movements
Total	640,000	

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Each product uses the same resources but in different quantities as shown below:

	AA	BB	CC
Direct material cost per unit	RM20	RM20	RM30
Labour rate per unit	RM5 per hour	RM5 per hour	RM10 per hour
Budgeted production (units)	1,500	2,500	4,000
Direct labour hours per unit	2	4	3
Machine hours per unit	3	2	3
Batch size (units)	50	100	500
Machines set up per batch	2	3	1
Purchase order per batch	4	4	6
Material movements per batch	10	5	4
Selling price (mark up on total production costs)	30%	30%	40%

All computations are to be rounded to two decimal points.

Required:

a) Calculate the production costs per unit for AA, BB and CC, using activity-based costing.

(8 marks)

b) Calculate the selling price per unit for AA, BB and CC, using activity–based costing.

(3 marks)

c) Identify potential non-value added activities in HL and what suggestions would you have for HL to improve the competitiveness of the company's products in the marketplace? (4 marks)

PART B

FOB has opened a small printing shop 12 months ago. FOB provides good printing services and the business is growing steadily, except for February which is a slack month due to long holiday. Its manager, Mr Adam has been studying the overhead cost and its relationship with machine hours.

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Data from the most recent 12 months follow.

Month	January	February	March	April	May	June
Overhead costs (RM)	5,030	1,600	7,210	4,560	6,880	6,520
Machine hours	2,730	600	3403	2,200	3,411	2,586

Month	July	August	September	October	November	December
Overhead costs (RM)	6,230	5,570	7,728	5,810	4,580	6,010
Machine hours	3,364	2,411	3,960	2,897	2,207	2,864

In order to better understand the relationship between machine hours and overhead costs, Adam has carried out regression analysis on the above data and the following regression analysis have been obtained.

Constant	R^2	b coefficient
428	0.99	1.86

The number of machine hours for next month is expected to be 3,000.

Required:

a) Using the results of the regression analysis, calculate an estimate of overhead costs for next month.

(2 marks)

b) Do you share Adam's confidence that the above estimate of next month's costs is likely to be accurate? Explain why or why not.

(2 marks)

c) Identify the outlier and develop an alternative estimate of next month's costs using the high-low method, and explain why this method is generally less reliable than regression analysis as a basis for cost estimation.

(6 marks)

[TOTAL: 25 MARKS]

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QUESTION 3

PCG Bhd. manufactures a standard prefabricated concrete garage. For next year, the following are the estimated direct costs per unit:

Direct material	RM280
Direct labour (14 hours @ RM11.00)	RM154
Direct expenses	RM26
Total direct cost per unit	RM460

Production overheads are absorbed at RM15.00 per direct labour hour and non-production costs at RM134 per unit. Both of these absorption rate is based on an anticipated production/sales volume of 5,000 units next year. The company adds a profit margin of 25 per cent of sales value to the total cost per unit in order to arrive at selling price.

Management wishes to increase next year's sales volume by 20 per cent (i.e. to 6,000 units) and believes that this could be achieved if selling price per unit were RM984.

Required:

a) Determine whether the company's policy of "adding profit margin of 25 per cent of sales value to the total cost per unit in order to arrive at selling price" is likely to yield the increased sales volume desired by management. Show supporting calculations.

(9 marks)

b) What target cost is necessary if the company is to achieve profit of 25 per cent of sales value on a unit selling price of RM984?

(3 marks)

c) Assuming that a volume increase from 5,000 to 6,000 units will not incur any additional overhead costs, re-calculate the cost per unit for

i) Production overhead; and
ii) Non-production overhead
iii) on the basis of production volume of 6,000 units (work to the nearest whole RM1).

(4 marks)

d) Using the new overhead costs from (c), confirm whether or not the target cost necessary in order to obtain the desired market share and earn the required profit will be achieved. (5 marks)

e) Why is target costing preferred over cost-plus pricing? (4 marks)

[TOTAL: 25 MARKS]

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QUESTION 4

Pak Tam Burger (PTB) has two fast food outlets, KLCC and AmCorp Mall, are among the fastest-growing outlets. Both are considering to expand their menus to include pizza. Purchase and installation of the necessary equipment costs RM180,000 per outlet.

The current investment in the KLCC outlet totals RM900,000. Outlet revenues are RM1,100,000 and expenses are RM920,000. Expansion of the KLCC's menu should increase profits by RM30,000.

The current investment in the AmCorp Mall totals RM1,700,000. The outlet's revenues are RM1,760,000 and expenses are RM1,496,000. Adding pizza to AmCorp Mall's menu should increase its profit by RM30,000.

PTB evaluates its manager based on return on investment (ROI). Managers of individual outlets have decision over the pizza expansion.

Required:

a) Calculate the return on investment (ROI):

   i) for both outlets before pizza is added (3 marks)

   ii) for the pizza project only (3 marks)

   iii) for both outlets after expansion (3 marks)

b) Assuming a 14 percent cost of capital, calculate residual income (RI):

   i) for both outlets before expansion (3 marks)

   ii) for the pizza project only (3 marks)

   iii) for both outlets after the potential expansion (3 marks)

c) Will the two PTB outlets choose to expand? Why? (7 marks)

[TOTAL: 25 MARKS]

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